

**ABSTRACT**

**[1099]** A method of supporting multiple PPP instances between a single wireless device and a wireless network using a single IP address and IP stack allows applications to exercise different link characteristics for individual PPP sessions. Routing based on parameters other than IP address, such as QoS parameters, that allow applications to utilize different types of services for same client server endpoints is provided. A PDSN determines whether or not multiple PPP sessions terminate at the same endpoint within a mobile device. A mobile device initiates a subsequent multiple PPP connection by specifying the IP address of an initial connection in the IP Address Configuration Option during IPCP negotiation for the subsequent connection. This address may be obtained from the IPCP phase of the initial PPP connection negotiation using Simple IP, or a Mobile IP Home Address obtained from the Mobile IP registration during establishment of the initial PPP session.